

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/492,300
Attorney Docket No. Q55891

REMARKS

Claims 1-17 are pending in the application. Claims 1-5 and 7-9 are rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Callway (U.S. Patent No. 6,184,861) (“Callway”). Allowability of claims 14-17 are withdrawn and claims 6 and 10-17 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Zhang (U.S. Patent No. 6,151,008) (“Zhang”) in view of Callway. Applicant adds new claims 18-19 to more particularly claim the invention and to traverse these rejections.

Applicant’s invention relates to an image display for medical diagnoses (see, description of the Applicant’s invention in the May 29, 2002 Amendment under 37 C.F.R. § 1.111).

Rejections Of Claims 1-5 And 7-9 Under § 102(e) Over Callway

Callway relates to a method and apparatus for processing video data and graphics utilizing intensity scaling accomplished by first determining whether video data or graphics data is being received. Received video data is processed based on a first intensity scaling range to produce intensity processed video data. Graphics data is processed based on a second scaling range to produce intensity processed graphics data. The intensity processed video data and/or the intensity processed graphics data is provided to a display via a digital-to-analog converter which generates different scaled analog outputs depending on whether the data being converted is graphics or video.

Applicant respectfully submits that claim 1 is patentable because Callway fails to teach or suggest each and every element of the claims. For example, Callway fails to teach or suggest “[a] display device, having . . . an image maximum luminance for displaying an image and an

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ordinary maximum luminance for displaying non-image information,” in combination with other elements of the claim. Although the Examiner alleges that the “first intensity” and the “second intensity” teach the claimed image maximum luminance and the ordinary maximum luminance, Applicant respectfully disagree.

Callway discloses a “first intensity scaling range” and a “second intensity scaling range” in the part of the reference cited by the Examiner. See column 2, lines 11-16. Both of these ranges are defined as voltage ranges. See column 4, lines 63-64; column 5, lines 9-11. Callway also discloses first and second voltage references which are defined as voltage levels. See column 4, lines 52-54. Nowhere in Callway, however, is there any teaching or suggestion of the image maximum luminance or the ordinary maximum luminance, as claimed. Although Callway mentions the voltage references with respect to the intensity of video data and graphics data, Callway still fails to teach or suggest the claimed luminance.

Additionally, Applicant submits that the invention and Callaway are fundamentally different. Callway is intended to increase the video intensity to thereby minimize visual differences between graphics (non-image information) and video (image). To the contrary, an object of the present invention is to increase image maximum luminance to prevent a lowering of the contrast in the low density area in the image. In medical diagnosis, as described in the present invention, it is important to find the disease at an early stage and thus it is necessary to accurately recognize shadows (or marks) of even a small size in an image. If an image contains a small white mark or a small and pale (low density) white mark in its low density area and it is required to accurately diagnose whether it is a disease or not (a small white mark which requires

careful examinations to determine whether it is a serious disease, such as a cancer, or not, is often found in a low density area of an image), it would be difficult to find a white mark of a disease such as cancer in the low density area of the image with the lower contrast, possibly resulting in a failure to find the cancer at an early stage or, in some cases, to lead to a misdiagnosis. It is an important objective to prevent the lowering of the contrast in the low density area in an image due to the ambient light in the field of medical diagnosis; this is in fact an objective of the present invention. However, Callway is completely silent regarding this fundamental objective.

Claims 2-5 and 7-9, which depend from claim 1, are patentable at least for the reasons submitted for claim 1.

In addition, Applicant submits that claim 5 is further patentable because the Examiner has failed to show that the reference teaches or suggests “wherein an entire display screen is adjusted to a brightness of display not higher than said ordinary maximum luminance in accordance with an operation using graphical user interface.” On the contrary, Callway makes no suggestion of any sort of a graphical user interface in connection with adjusting brightness of the display.

Rejections Of Claims 6 And 10-17 Under § 103(a) Over Zhang In View Of Callway

Zhang relates to a method and apparatus of controlling the brightness level of an LCD display. According to Zhang, the brightness of a display having two light bulbs may be controlled by illuminating only one bulb to provide a relatively low brightness level or by illuminating both bulbs to provide a relatively high brightness level.

Applicant submits that it would not have been obvious at the time of the invention to combine Zhang and Callway because each of the references teach away from the other. Zhang teaches a “diffusion screen 22 [] designed to provide relatively uniform brightness levels across the entire area of the LCD display 12 regardless of whether one or both light bulbs 18 and 20 are illuminated.” See column 6, lines 11-14. On the other hand, Callway teaches processing of video data and graphics data according to different intensity scaling ranges and the possibility of “the display 22 [] display[ing] a background 48 and at least one window 46, where the video data could be displayed in the background 48 and the graphics data in the window 46, or vice versa.” See column 2, lines 48-54. In other words, Zhang expressly teaches away from having one brightness level for one type of data and another brightness level for another type of data.

Furthermore, there is no suggestion or motivation to make the proposed combination of Zhang and Callway because the combination of the references would change the principle of operation of Zhang. See M.P.E.P. § 2143.01. In order “to incorporate the two sets of maximum luminance including an image maximum luminance for displaying an image and an ordinary maximum luminance for display[ing] non-image information as taught by Callway in the system of Zhang,” as asserted by the Examiner, the display device must be able to display two levels of luminance when an image and a non-image are simultaneously displayed. As mentioned above, Zhang explicitly teaches having uniform brightness across the entire display at one of two levels. Moreover, the Examiner’s combination of references would require a substantial reconstruction and redesign of the diffusion screen 22 shown in Zhang as well as a change in the basic principle of providing a uniform brightness, under which the Zhang construction was designed to operate.

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Such substantial reconstruction or redesign leads to the conclusion that there is no suggestion or motivation to combine the references in the manner espoused by the Examiner.

Therefore, for the above reasons, the references can not be properly combined and claims 6 and 10-17 are patentable.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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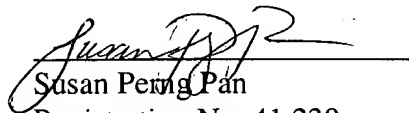
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